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Application No.

09/903,347

Examiner

Tae H Yoon

Applicant(s)

MCCULLOUGH ET AL.

Art Unit

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|-------|----------|--------------|----------|----------|--------|----------|--|--|----------|-----------------|----------|---------|----------|-----------------|-------------------------|--|----------|-----------|------------|------|-----|----------|------------|----------|-----------------|----------|----|----------|-----------------|----------|----------|------------|--|
| Final | Original | 8/25/03      |          |          |        |          |  |  |          |                 | Final    | T       | Original |                 |                         |  |          |           |            |      |     | Final    | Original   |          |                 |          |    |          |                 |          |          |            |  |
|       | Õ<br>1   | /8<br>V      |          |          |        | _        |  |  |          |                 |          | _   _   | ō<br>51  | 1               | -                       | $\downarrow$   | _        |           | $\dashv$   |      |     |          | Ō<br>101   |          |                 | _        | _  |          | _               | _        | -        | _          |  |
|       | 2        | V            | +        |          |        | -        | -  | $\vdash$   |          | $\dashv$        | -        |         | 52       | -+              |                         | +-   | +-       | -         | $\dashv$   | +    | ┤   |          | 102        | -        | -               |          | -  |          | -               | +        | -        | _          |  |
|       | 3        | V            | $\vdash$ | -        |        | $\neg$   | -  | -  | _        |                 | -        |         | 53       | -+              | +                       | +  | +-       | -+        | -          | -+-  | 1   | <u> </u> | 103        |          | -+              | -+       |    |          | -               | -        |          | _          |  |
|       | 4        | v            | $\vdash$ | ᅱ        | $\neg$ |          |  | -  | _        |                 | -        |         | 54       | -+              | 十                       | +  | $\vdash$ | $\vdash$  | $\dashv$   | -    | ┨ . |          | 104        | -        | - +             | -        | -  |          |                 | _        | -        |            |  |
|       | 5        | v            | $\vdash$ | - 1      |        |          |  | -  | -        | -               | -        |         | 55       |                 | +                       | +  | +        | $\vdash$  | $\dashv$   | +    | 1   |          | 105        |          |                 | -        | -1 | -        | -               | $\dashv$ | -        | _          |  |
|       | 6        | v            |          |          | -      | $\vdash$ | -  | -  | _        |                 | -        |         | 56       | -†              | 十                       | +  |          |           |            | +-   | 1   | -        | 106        |          |                 |          |    |          |                 |          | $\dashv$ | _          |  |
|       | 7        | v            | $\vdash$ | -        |        |          | -  | -  |          |                 |          | +       | 57       | -               | +                       | +  | <b>†</b> |           | _          | _    | 1   |          | 107        | -        |                 |          |    |          | 一               | 7        | $\dashv$ | _          |  |
|       | 8        | v            |          | ┪        |        |          |  |  | _        | $\vdash$        |          |         | 58       | $\neg \uparrow$ | +                       | 1  | † –      | $\vdash$  |            | ~  - | 1   |          | 108        |          |                 |          | _  | $\neg$   |                 | $\dashv$ |          | _          |  |
|       | 9        | v            |          | 7        |        |          |  | _  |          |                 |          |         | 59       |                 | +                       | $\top$   | T -      |           | 7          | _    | 1   |          | 109        |          | $\vdash$        |          |    |          |                 | ┪        |          | _          |  |
|       | 10       | v            |          |          | $\neg$ |          |  |  |          |                 |          |         | 60       | 寸               | 7                       | 1  | $\top$   |           |            |      | 1   |          | 110        |          |                 | 7        |    |          |                 |          |          | П          |  |
|       | 11       | ν            | 7        |          | _      |          |  |  |          | $\Box$          |          |         | 61       | $\neg \vdash$   | $\neg$                  | 十  |          |           | _          | _ _  | 1   |          | 111        | $\Box$   |                 |          |    |          |                 |          | $\neg$   | <u> </u>   |  |
|       | 12       |              | $\Box$   | ┪        | $\neg$ |          |  |  |          |                 |          |         | 62       |                 | $\top$                  | $\top$   |          | П         |            | _    |     |          | 112        |          |                 |          |    |          |                 | $\neg$   | $\neg$   | ī          |  |
|       | 13       |              |          | $\neg$   |        |          | Ι.   |  |          |                 |          |         | 63       |                 |                         | $\top$   |          |           |            |      | 1   |          | 113        | П        |                 | $\neg$   |    |          |                 |          |          | _          |  |
|       | 14       |              |          |          |        |          |  |  |          |                 |          |         | 64       |                 |                         |  |          |           |            |      |     |          | 114        |          |                 |          |    |          |                 |          |          | _          |  |
|       | 15       |              |          |          |        |          |  |  |          |                 |          |         | 65       |                 | I                       | $oldsymbol{ol}}}}}}}}}}}}$ | L        |           | ┚          |      |     |          | 115        |          |                 |          |    |          |                 |          |          |            |  |
|       | 16       |              |          |          |        |          |  |  |          |                 |          |         | 66       |                 | $\perp$                 | $\perp$  |          |           | [          |      |     |          | 116        |          |                 |          |    |          |                 |          |          | Ĺ          |  |
|       | 17       |              |          | $\Box$   |        |          |  |  |          |                 |          |         | 67       | I               |                         |  |          | $\Box$    | $_{\perp}$ |      | 1   |          | 117        |          | Ш               |          |    |          |                 |          | ]        | _          |  |
|       | 18       | _            |          |          |        |          |  | لــــا   |          |                 |          |         | 68       | $\perp$         | $\perp$                 | $\perp$  | Ŀ        |           | _          | _ _  | 1   |          | 118        |          |                 |          |    |          |                 |          |          |            |  |
|       | 19       | L            |          |          |        |          |  | L.,  | L        |                 |          |         | 69       | _               | ┙                       | $\bot$   |          |           | _          | _ _  | 1   | L        | 119        |          |                 | _        |    |          |                 |          |          | <b>.</b>   |  |
|       | 20       | _            |          | _        | _      |          |  |  |          |                 |          |         | 70       | _               | $\bot$                  |  |          |           | _          |      |     |          | 120        |          |                 |          |    |          |                 |          |          | _          |  |
|       | 21       |              |          | _        |        | _        | _  | _  | _        |                 | <u> </u> | _       | 71       |                 |                         |  | 1_       |           | $\perp$    |      | 1   | <u></u>  | 121        |          |                 |          |    |          |                 |          |          | <u> </u>   |  |
|       | 22       |              | Ш        |          |        |          | L_   | $\sqcup$   |          |                 | _        |         | 72_      | _               | 4                       |  | 1        |           | _          |      | 1   |          | 122        |          |                 |          |    |          |                 | ]        |          | L          |  |
|       | 23       | <u> </u>     | $\sqcup$ | _        | _      |          | <u> </u>   | Ш  | <u> </u> | $\sqcup$        |          |         | 73       |                 | +                       | $\perp$  | $\perp$  | _         | _          | _ _  | 4   | L        | 123        | _        |                 |          |    |          |                 |          |          | <u> </u>   |  |
|       | 24       | <u> </u>     | -        |          |        |          |  |  | _        | $\sqcup$        |          |         | 74       | _               | +                       | +  | +        |           |            |      | -   |          | 124        | _        |                 | _        |    |          | Н               |          | _        | -          |  |
|       | 25       | <u> </u>     |          |          | '      |          |  |  |          |                 | <u> </u> |         | 75       |                 |                         |  | -        | -         | -          |      | -   |          | 125        |          | H               |          |    |          | -               | _        | $\dashv$ | -          |  |
|       | 26       | ١            |          |          |        |          | <b> </b>   | -  | _        |                 | ļ        |         | 76       | -               | 4                       |  |          |           | -          | -    | -   | <u> </u> | 126        |          | $\sqcup$        |          |    |          |                 |          |          | <b>-</b> - |  |
|       | 27       | ┡            | -        |          | _      |          |  | -  |          |                 | <u> </u> |         | 77       | -+              |                         |  | ╁        | -         | _          |      | 4   |          | 127        |          | $\vdash$        |          | Ľ. |          |                 | -1       | _        | $\vdash$   |  |
|       | 28       |              |          |          |        | _        | ├  | -  |          | $\mid - \mid$   |          |         | 78       | -+              | +                       | +  | $\vdash$ | -         |            |      | -   | -        | 128        | _        | $\vdash$        |          |    | -        |                 |          | -        | <u> </u>   |  |
|       | 29       | -            |          |          |        | -        | -  | -  | _        |                 | -        |         | 79       | -+              | +                       | +  | -        | ┝╼┥       | $\dashv$   | -    | -   | -        | 129        | _        |                 |          |    | _        |                 |          | -        | -          |  |
|       | 30<br>31 | ┝            | H        | -        | _      | -        |  | -  | -        | $\vdash$        | -        |         | 80<br>81 | -+              | +                       | +  | +-       | $\vdash$  |            | - -  | 1   |          | 130<br>131 | -        |                 |          | _  | -        | $\dashv$        | -        | -        | -          |  |
|       | 32       | ┝            | $\vdash$ | _        | _      | _        | -  | -  | -        | $\vdash$        | -        |         | 82       | $\dashv$        | +                       | +-   | ╁        | -         |            | +    | +   |          | 132        | _        | $\vdash$        | -+       |    |          | -               | $\dashv$ | $\dashv$ | -          |  |
| _     | 33       | -            |          |          | -      | _        | -  | -  | -        | $\vdash$        | -        |         | 83       | +               | +                       | +  | +-       |           | -          | -+-  | 1   | <b>-</b> | 133        | -        |                 |          |    | $\vdash$ | $\vdash$        | -+       |          | H          |  |
|       | 34       | <del> </del> | H        |          | _      | $\vdash$ | $\vdash$   | $\vdash$   | -        | $\vdash \dashv$ | -        |         | 84       | $\dashv$        | +                       | +-   | +-       |           | $\dashv$   | +    | 1   |          | 134        | $\vdash$ | $\vdash$        | $\dashv$ |    |          |                 | $\dashv$ |          | $\vdash$   |  |
|       | 35       | -            |          | $\dashv$ |        | -        | <del>                                     </del> | <del>                                     </del> |          | -               | -        |         | 85       | $\dashv$        | +                       | +-   | +-       |           | -+         | +    | 1   |          | 135        |          |                 | -        |    |          |                 | +        | $\dashv$ | Г          |  |
|       | 36       | 1            | $\vdash$ | 一        |        |          | <u> </u>   | <del>                                     </del> | $\vdash$ | $\vdash \dashv$ |          |         | 86       | $\neg \dagger$  | $\top$                  | $\top$   | t        | $\vdash$  | $\dashv$   |      | 1   |          | 136        |          |                 | $\dashv$ |    |          |                 |          |          | Γ          |  |
|       | 37       |              |          | $\dashv$ |        |          |  | 1  | -        |                 |          |         | 87       | _               | 一                       | 1  |          |           | $\neg$     |      | 1   |          | 137        |          | $\vdash$        |          |    | H        | Н               | - 1      | $\neg$   | Г          |  |
|       | 38       | Γ            |          | $\neg$   |        |          |  |  |          | $\vdash$        |          |         | 88       |                 | +                       | $\top$   |          |           |            | _    | 1   |          | 138        |          | $\vdash \dashv$ | $\neg$   |    |          | $\vdash \dashv$ | 7        | $\neg$   | Γ          |  |
|       | 39       | Ι            | $\Box$   |          |        | $\Box$   | T  |  |          | П               |          |         | 89       | $\neg$          | 十                       | 1  |          |           | $\dashv$   | +-   | 1   |          | 139        |          |                 | $\neg$   |    |          | $\Box$          |          |          | _          |  |
|       | 40       |              |          |          |        |          |  |  | _        |                 |          |         | 90       | 7               | 7                       | _  | ţΤ       |           |            | _    | 1   | <u> </u> | 140        |          |                 | -        |    |          |                 |          | $\neg$   | Γ          |  |
|       | 41       |              |          |          |        |          |  |  |          |                 |          |         | 91       | 7               | 7                       | 7  | 1-       | $\sqcap$  | $\neg$     | 1    | 1   |          | 141        |          | $\Box$          |          |    | $\Box$   |                 | _        |          | _          |  |
|       | 42       |              |          |          |        |          |  |  |          |                 |          |         | 92       |                 |                         | T  |          |           |            |      | 1   |          | 142        |          | П               |          |    |          |                 | $\neg$   | $\neg$   | ī —        |  |
|       | 43       |              |          |          |        |          |  |  |          |                 |          | $\neg$  | 93       |                 | $oldsymbol{\mathbb{T}}$ |  |          |           |            |      | ]   |          | 143        |          |                 |          |    |          |                 |          |          | Γ          |  |
|       | 44       |              |          |          |        |          |  |  |          |                 |          | T       | 94       |                 | $\Box$                  | I  |          |           |            |      | ]   |          | 144        |          |                 |          |    |          |                 |          |          |            |  |
|       | 45       |              |          |          |        |          |  |  |          |                 |          |         | 95_      | $\Box I$        |                         |  |          |           |            |      |     |          | 145        |          |                 |          |    |          |                 |          |          |            |  |
|       | 46       | _            | Ш        |          |        |          |  |  |          |                 |          | $\perp$ | 96       |                 |                         |  |          |           | $_{-}$     | _[   | 1   |          | 146        |          |                 |          |    |          |                 |          |          | _          |  |
|       | 47       |              |          |          |        |          |  |  |          |                 |          |         | 97       |                 | $\bot$                  |  |          |           | $\Box$     |      | ]   |          | 147        |          |                 |          |    |          |                 |          |          | _          |  |
|       | 48       |              | $\sqcup$ | ļ        |        |          |  |  |          | Ш               |          | _       | 98       |                 | 1                       |  | 1        |           | $\Box$     | _ _  |     |          | 148        |          |                 | _]       |    |          |                 | ]        | ]        | _          |  |
|       | 49       | <u> </u>     | $\sqcup$ |          |        |          | <u> </u>   | <u> </u>   |          | $\Box$          |          | 4       | 99       | 4               | 1                       | 4  | 1_       | $\square$ |            | _ _  | 4   |          | 149        |          |                 |          |    |          |                 |          |          | _          |  |
|       | 50       |              | Ll       |          |        |          |  |  |          |                 |          |         | 00       |                 |                         |  | 1        |           | - 1        |      | 1 . |          | 150        |          |                 | Į.       | I  |          | . (             | ļ        | - 1      |            |  |